

Oracle Integration
ERP Outbound BIP Report

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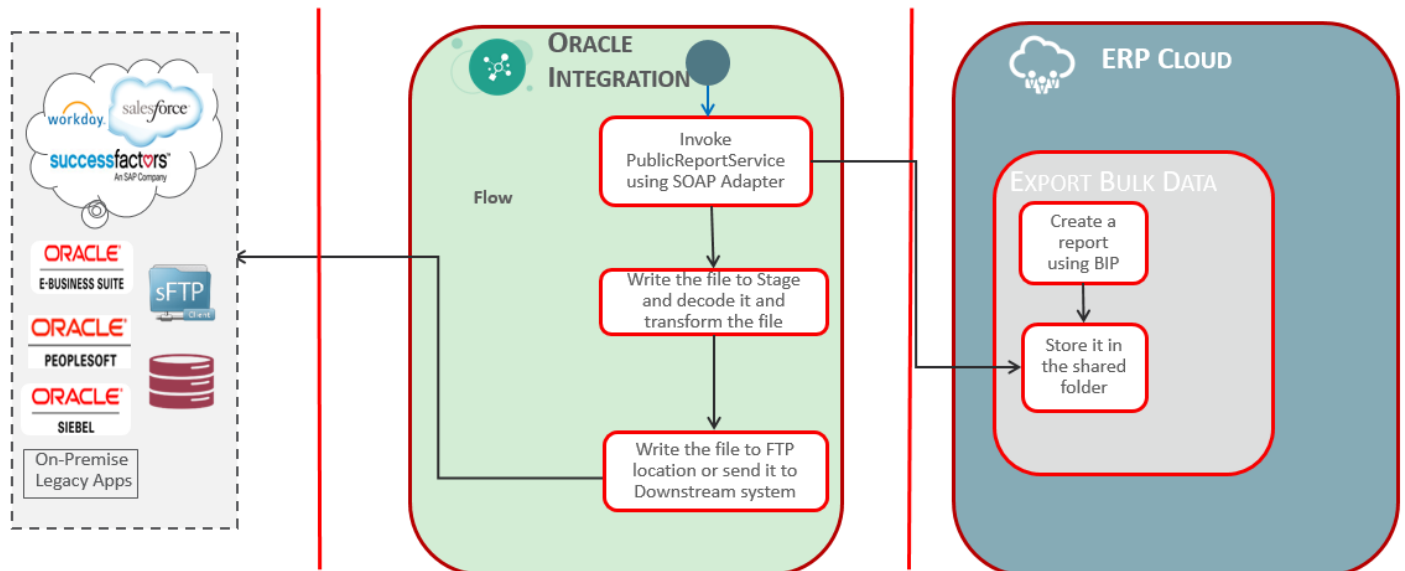
EXECUTIVE SUMMARY

Oracle Integration provides native connectivity to Oracle and non-Oracle Software as a Service (SaaS) and On-premises applications, such as Oracle ERP Cloud, Oracle Service Cloud, HCM Cloud, Salesforce.com, Workday, EBS, SAP, NetSuite and so on. OIC adapters simplify connectivity by handling the underlying complexities of connecting to applications using industry-wide best practices. You only need to create a connection that provides minimal connectivity information for each system.

STORYLINE AND PERSONAS

This use case explores the use of OIC with ERP BIP report. User creates a report in ERP cloud using BIP and puts/shares it in shared folder. OIC connects to ERP BIP service and pulls the report, decodes the response, does the required transformations and writes it into the FTP location.

The following diagram illustrates the proposed interaction between the systems involved in this use case.



OBJECTIVE

This document walks you through the steps needed to replicate this use case in your environment

Prerequisites

You will need access to the following applications and products:

- Oracle Integration
- ERP Cloud
- FTP Server

Use case

Call BIP Report service using SOAP Adapter, decode the response, and write it to a CSV file in the FTP Location using FTP adapter

Logical flow of the integration

- Create a report in ERP cloud using BIP service and store it under shared folder, and make a note of folder structure and report name.
- Create a connection using FTP Adapter
- Create a connection using SOAP adapter
- Create integration flow to call the report, decode it and store it in the FTP location

Lab Environments

- **ORACLE INTEGRATION Login**
 - **Refer** ERPIntegrationWorkshopEnv.txt
- **ERP Cloud Login**
 - **Refer** ERPIntegrationWorkshopEnv.txt
- **Naming convention**
 - **Note that accounts are shared between all users**
 - **To avoid conflict between Lab users, append your class id and student id to artifacts and you can get these ids from the instructor**

Task Overview

- Verify connectivity to ORACLE INTEGRATION and ERP Cloud
- Create 2 connections in ORACLE INTEGRATION
 - FTP Connection
 - ERP cloud connection using SOAP adapter
- Build integration in ORACLE INTEGRATION
- Test integration
- Validate results

Important

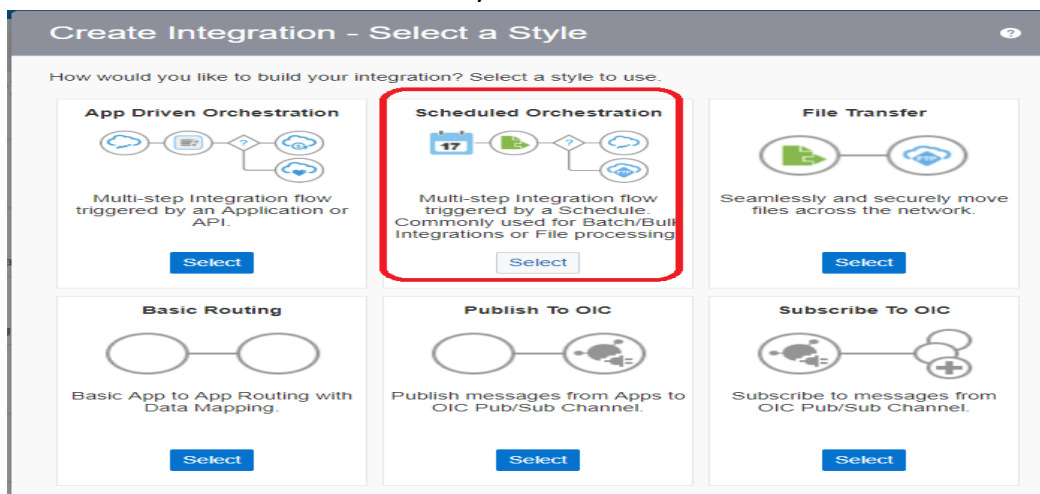
As the integration is being built, it is important to save it by clicking “Save” button on top-right after each activity or in-between long activities such as mapping. This makes sure that the changes are preserved in case of session timeouts.

Create SOAP Connection & FTP Connection

Note: Participants are requested to use existing connections (c 96 06 & FTP Conn 96 06) instead of creating new connection.

Create Integration Flow

1. Go to Integration Cloud console → Designer → Integrations → Click on Create
2. Select “Scheduled Orchestration” Style and click on Select




3. Provide Integration name “ERP BIP Extract to FTP ”+<<ClassID>>+<<Studentid>> and package name as erp.report.lab and click on Create

Eg: ERP BIP Extract to FTP 96 06

?

Create New Integration



Create New Integration

Enter information that describes this integration.

Describe this integration Use a meaningful name and description that will help others find and understand this integration. The Identifier and Version can be set only when the integration is created. The combination of Identifier and Version must be unique.

* What do you want to call your integration?

ERP BIP Extract to FTP 96 06

* Identifier

ERP_BIP_EXTR_TO_FTP_96_06

* Version

01.00.0000

What does this integration do?

Describe the integration's purpose and detail

Enter a version number using numbers (0-9) in the following format: major.minor.patch (xx.xx.xxxx). It cannot be longer than 10 characters.

Enter a new or existing package name

belong to?

Create

Cancel

4. System displays the following screen

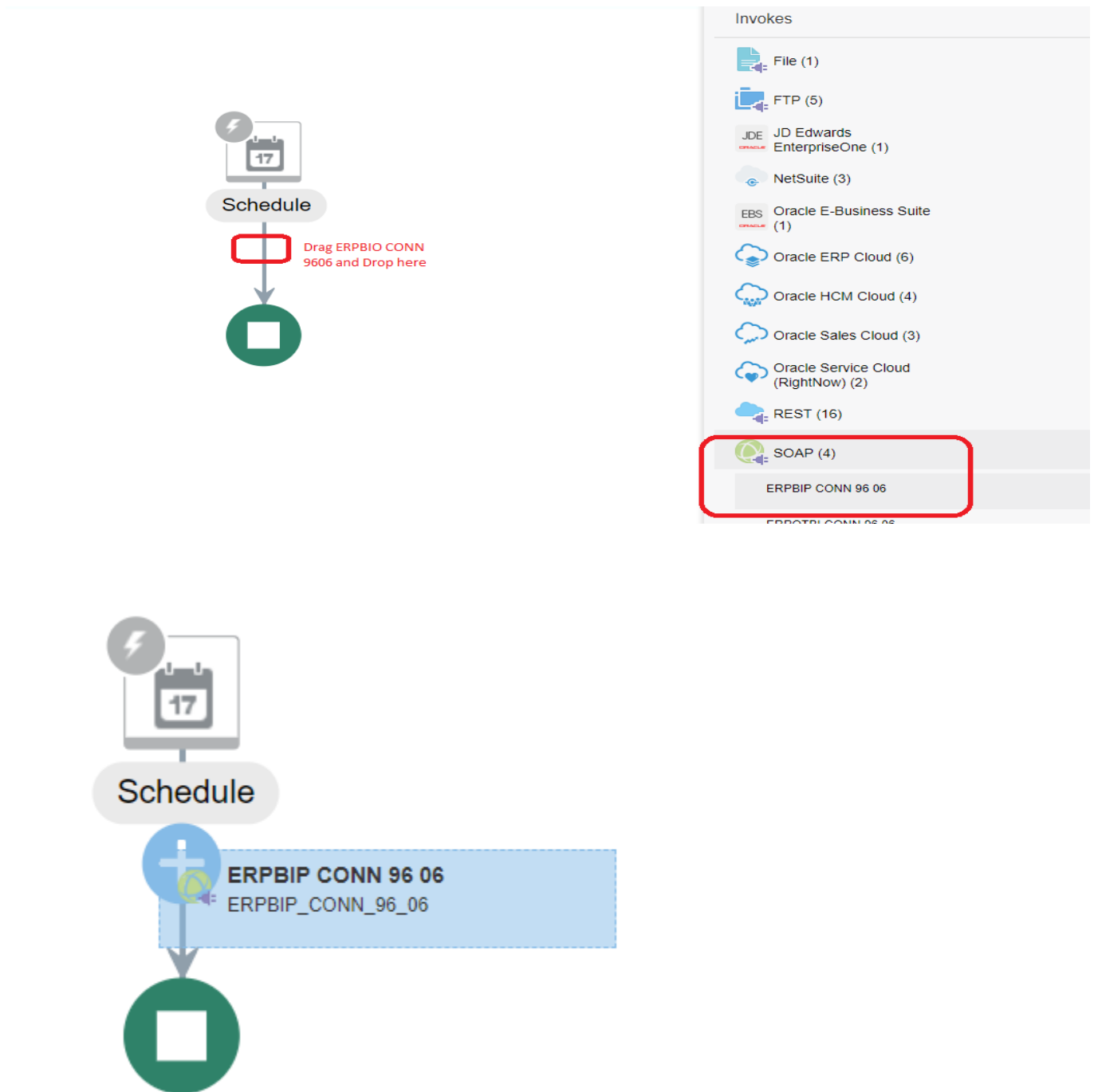
```

graph TD
    A[Schedule] --> B[ ]
    style B fill:#008000,color:#fff,stroke:#fff,stroke-width:2px
  
```

5. Click on Invokes which is on right side of the screen → Expand SOAP adapter → Select the adapter ERPBIP CONN 96 06 and drag and drop as per the below screen

Integrating your ERP with Oracle Integration

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6. Enter the information as per the below screen and click on Next → Select runReport operation and click Next → Click Next and Click Done

Configure SOAP Endpoint

Help ▾ < Back Next > Cancel Done

Welcome to the Oracle SOAP Adapter Endpoint Configuration Wizard
This wizard helps you create a service using the Oracle SOAP Adapter.

Basic Info

Operations

Callback Operation

Headers

Request-Headers

Response-Headers

Summary

* What do
Enter a name using letters (A-Z a-z), numbers (0-9) and special characters (_ -). It cannot be longer than 50 characters and must start with a letter.

GetBIPReport

What does this endpoint do?

Describe the endpoint's purpose and detail

Do you want to configure this as a callback invoke? ☒ No ☐ Yes

Configure SOAP Endpoint

Help ▾ < Back Next > Cancel Done

Configure the Oracle SOAP Adapter Endpoint
Select the Service, Port and Operation for use in this integration. If the WSDL has single service, port and operation, they are used by default. If multiple Services, Ports or Operations are defined in the WSDL, select the ones to use in this integration.

Basic Info

Operations

Callback Operation

Headers

Request-Headers

Response-Headers

Summary

Selected Service PublicReportServiceService

Selected Port PublicReportService

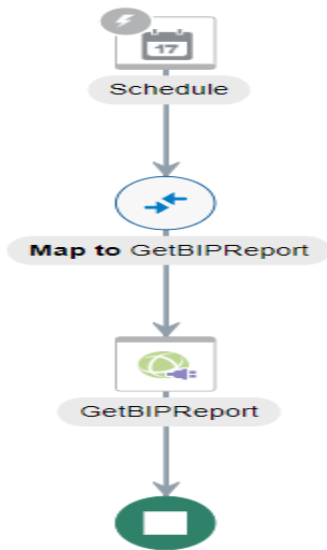
Select the Operation runReport ▾

Request Object runReportRequest

Response Object runReportResponse

Fault Object AccessDeniedException, OperationFailedException, InvalidParametersException,

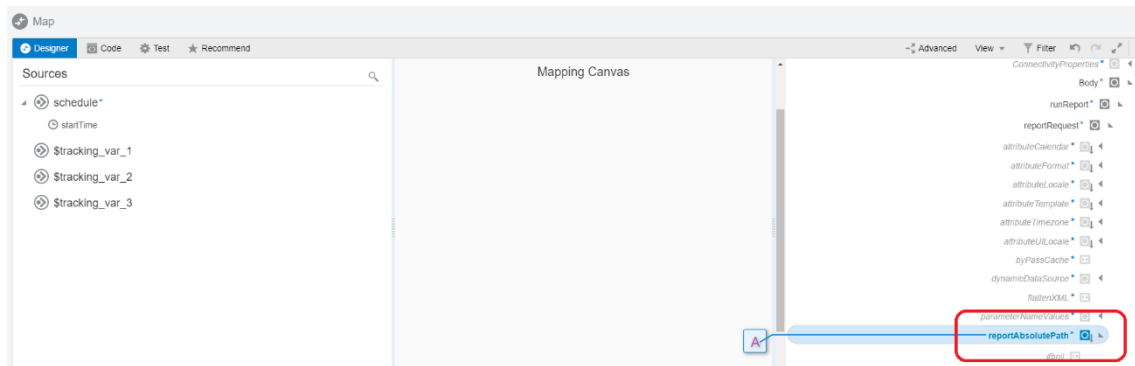
7. System displays the screen given below



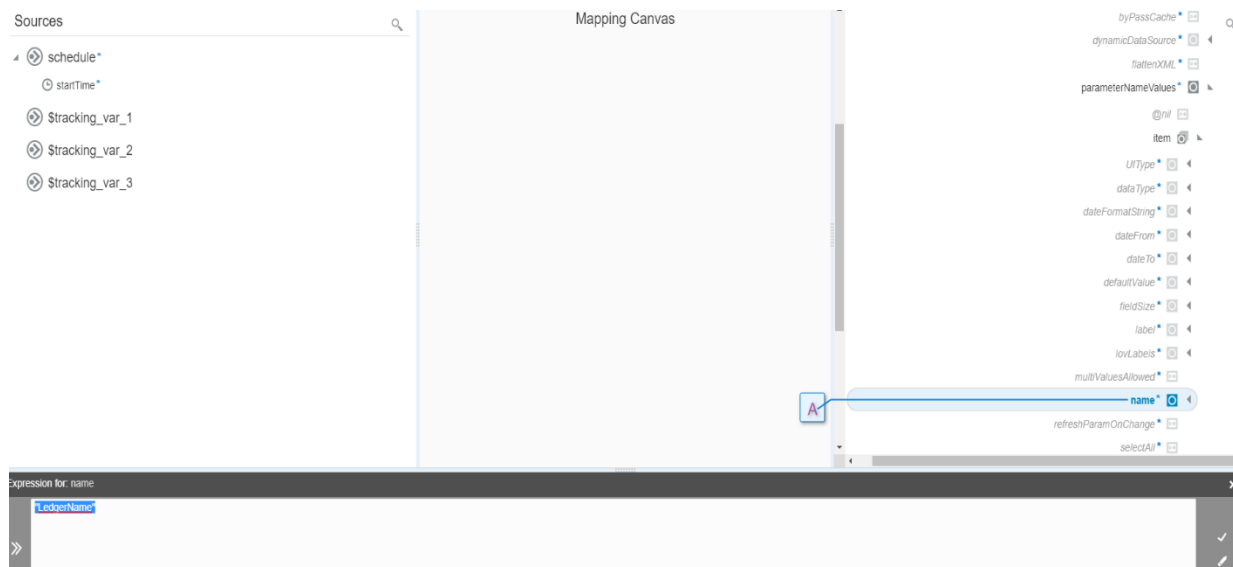
8. Click on Edit of 'Map to GetBIPReport' activity



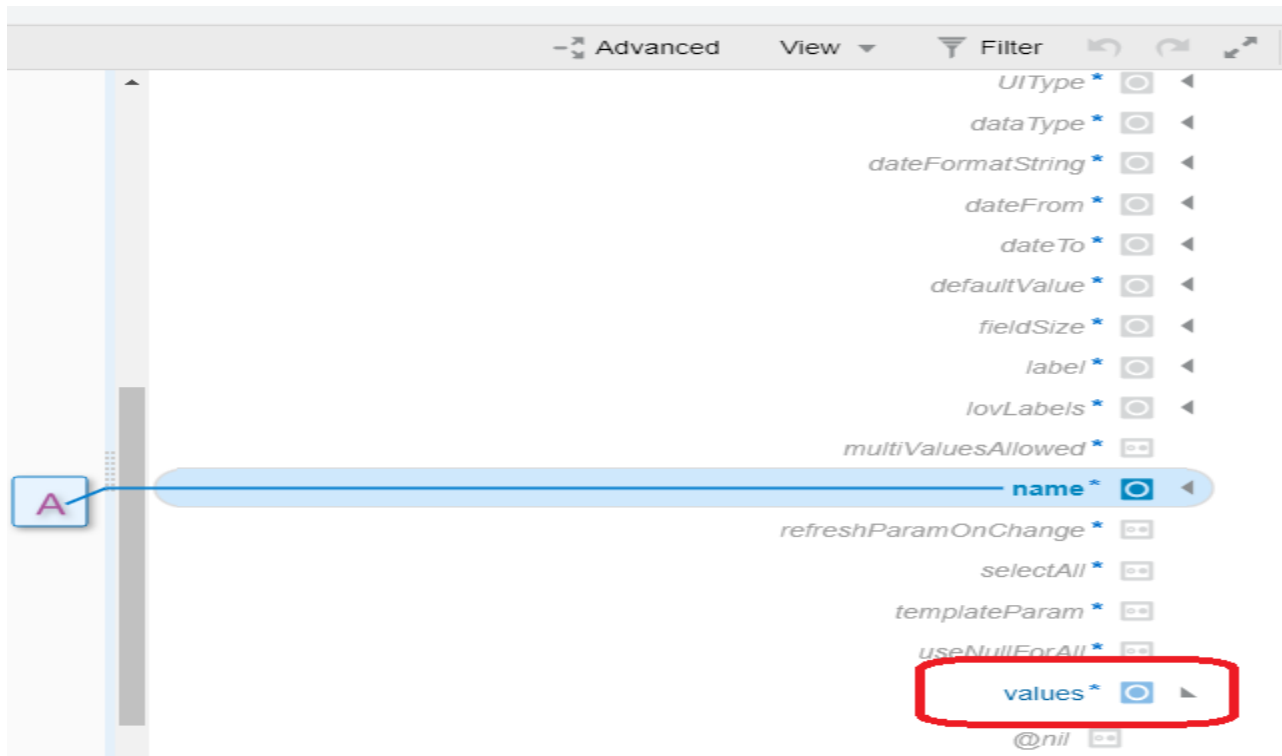
9. Expand OutboundSOAPRequestDocument → expand Body → expand runReport → expand reportRequest → Right click on reportAbsolutePath → Click on 'Create Target Node' → Enter absolute path of the report as `"/Custom/Financials/GLCCReport.xdo"` and click on Save and close the expression editor.



10. Expand parameterNameValues → expand item → right click on name → click on 'Target Node' → enter "LedgerName" and click on Save and close



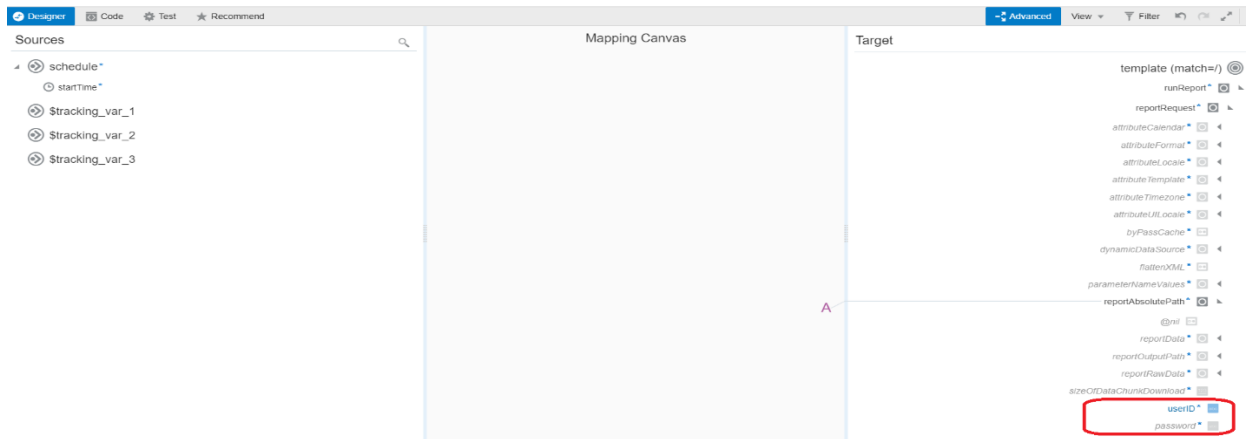
11. Expand values as per the below screen



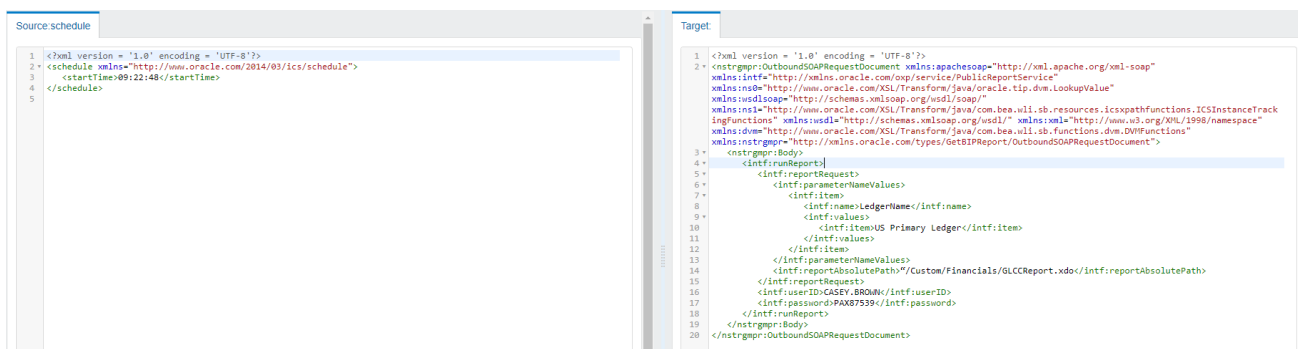
12. Right click on item → Click on 'Create Target Node' → Enter "US Primary Ledger" and click on Validate



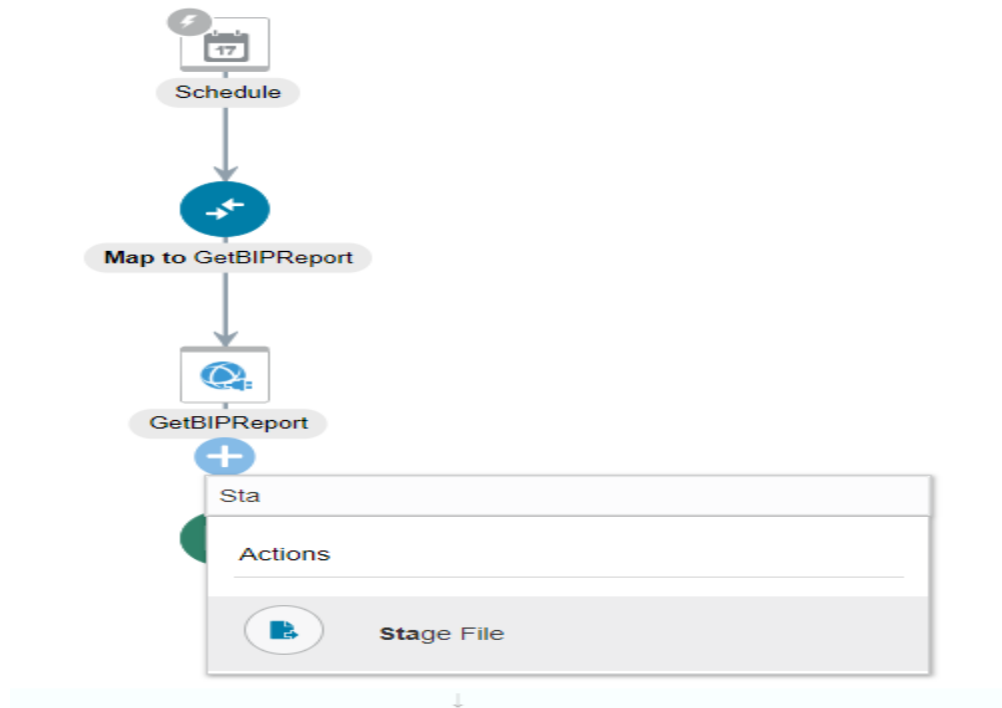
13. Right click on userId → Click on 'Create Target Node' → Enter "CASEY.BROWN" and save it and right click on password → Click on 'Create Target Node' → Enter ERP Cloud Password (Get the password from ERPIntegrationWorkshopEnv.txt) and click on Save and close the expression editor.



14. Click on Validate → If successful click on Test → Click on Generate Inputs → Click on Execute and check the Target to cross check the values, which you have mapped. If Validation fails, then please cross check your mappings



15. Click on Validate and Close
 16. Click on + icon after GetBIPReport activity → Search for Stage File activity and click on it




17. Enter the information as per the below screenshots

The screenshot shows the 'Configure Stage File Action' wizard. The title bar reads 'Configure Stage File Action'. The main window has a toolbar with 'Help', '< Back', 'Next >', 'Cancel', and 'Done'. A welcome message states: 'Welcome to the Stage File Action Configuration Wizard. This wizard helps you to configure Stage File Action. You will be asked to define parameters and schema for performing the file operation.' The left sidebar contains a list of steps: 'Basic Info' (selected), 'Configure Operation', 'Schema Options', 'Format Definition', and 'Summary'. The main content area for 'Basic Info' contains two questions: '* What do you want to call your action?' with the text 'StageFileWrite' entered, and 'What does this action do?' with the text 'Describe the action's purpose and detail' entered.


Configure Stage File Action


Help ▾ < Back Next > Cancel Done

 **Configure the Stage File Action Parameters for the Selected Operation**
Define the parameters for Stage File Operation

Basic Info
Configure Operation
Schema Options
Format Definition
Summary

? * Choose Stage File Operation Write File ▾


* Specify the File Name "temp.csv" 

* Specify the Output Directory "/tmp" 

Append to Existing File ☐

Configure Stage File Action

Help ▾ < Back Next > Cancel Done

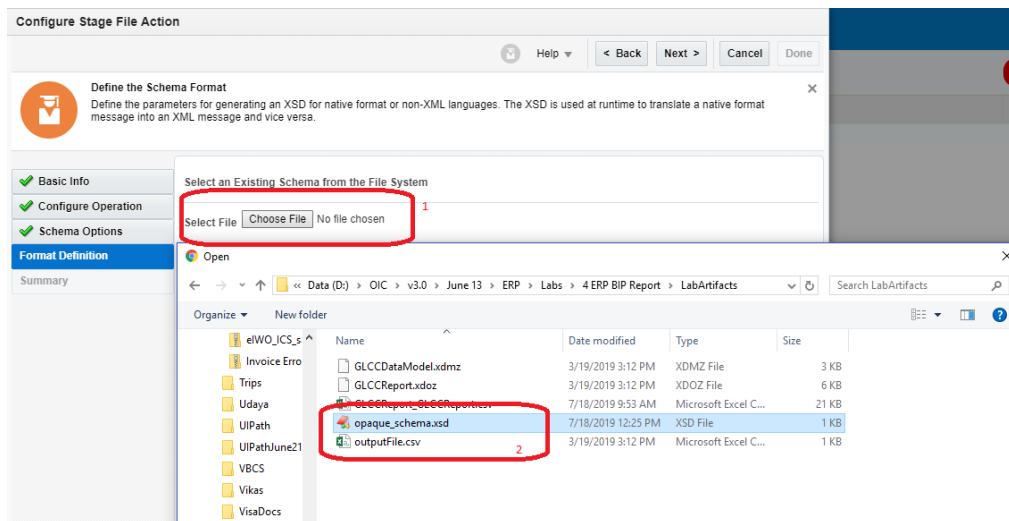
 **Configure the Stage File Action with Schema Options**
Define the schema options for Stage File Operation

Basic Info
Configure Operation
Schema Options
Format Definition
Summary

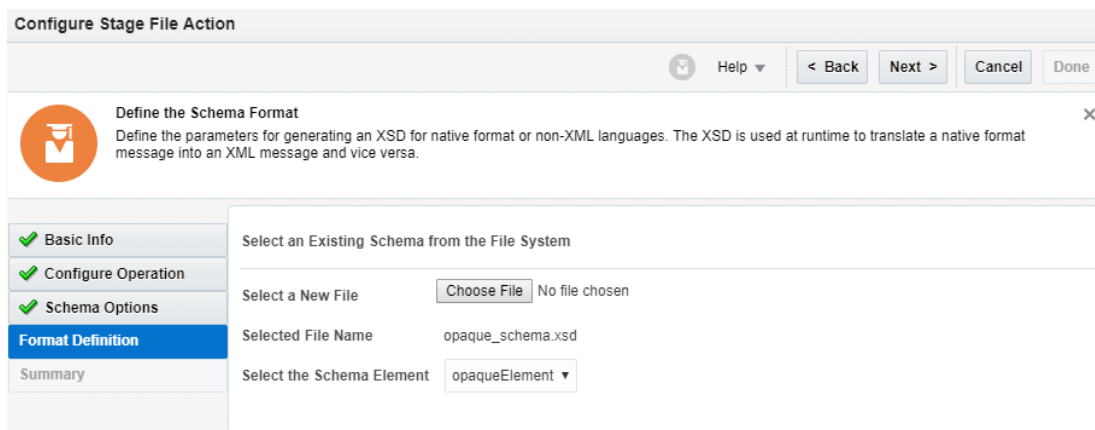
? Do you want to specify the structure for the contents of the file?
☒ Yes ☐ No

? Which one of the following choices would be used to describe the structure of the file contents?
XML schema (XSD) document ▾

18. Select "opaque_schema.xsd" from the LabArtifacts folder as per the screenshot below.



19. System displays the below screen → Click on Next



20. Look at the summary screen and click on Done

Configure Stage File Action

Stage File Action Configuration Summary.
Stage File Action configuration was successful.

Basic Info
Configure Operation
Schema Options
Format Definition
Summary

StageFileWrite

Description

Selected Stage File Operation Write

File Name "temp.csv"

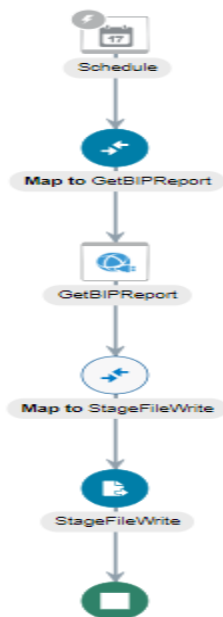
Output Directory "/tmp"

Append to Existing File false

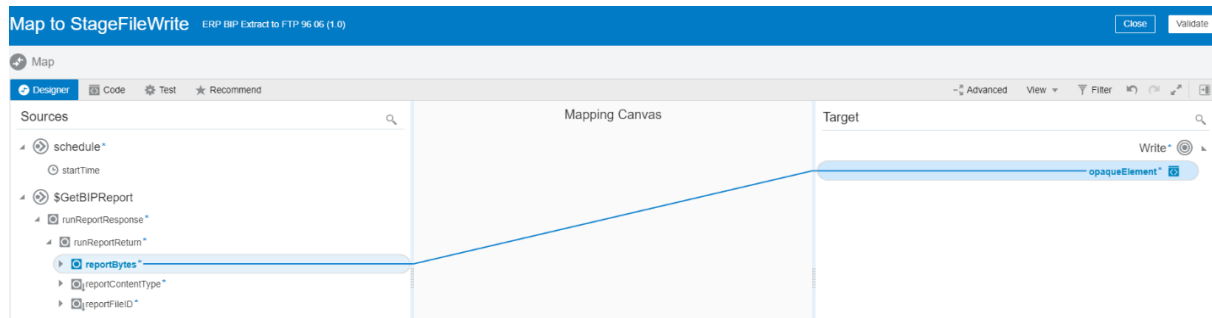
Format Definition [Schema](#)

Element opaqueElement

21. So far, Integration looks like the below screen.



22. Edit “Map to StageFileWrite” activity and expand \$GetBIPReport → expand runReportResponse → expand runReportReturn → map reportBytes with opaqueElement in the target. And click on Validate and close. In addition, click on Save to save the integration flow.



23. Click on Actions → Drag and Drop Assign activity below the 'StageFileWrite' activity as shown below.

24. Enter name of the activity as 'DecodeResponse'

Create Action

Assign

Please give a unique name and description to this action.

Name

Description

25. Click on + icon

Assign

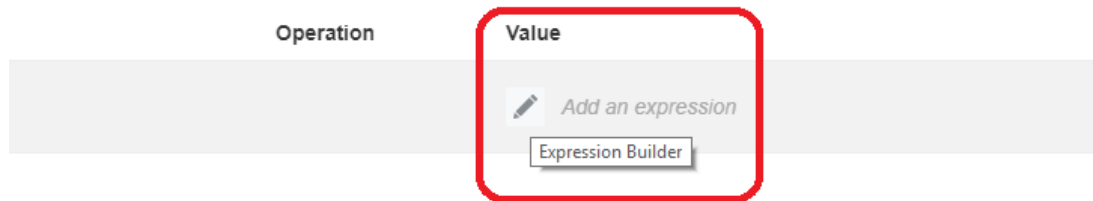
Assign variables to your integration. You can assign values to variables using the editor. Variable assignments can be a greater of complexity. For example, you can use assignments in other activities and in maps.

Add at least one named variable and specify its value by adding an expression.

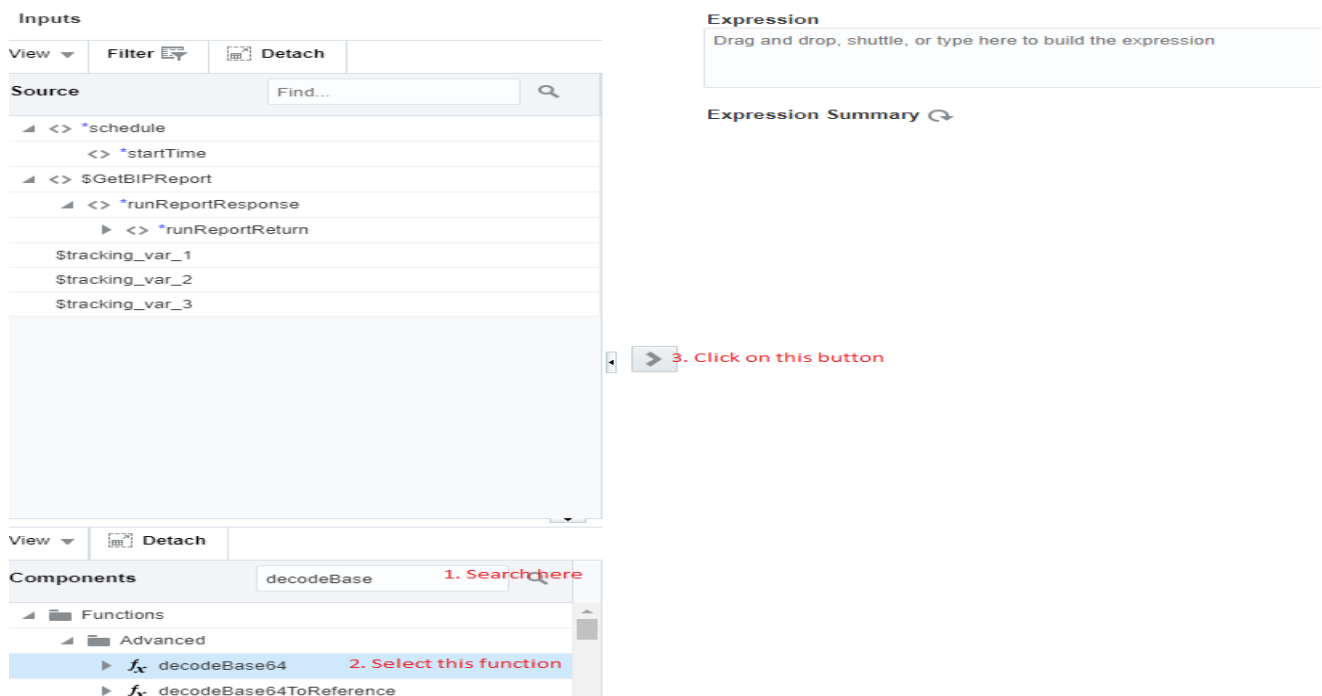
Variable	Data Type	Description	Operation	Value
No data to display				

26. Click on Expression Editor under Value

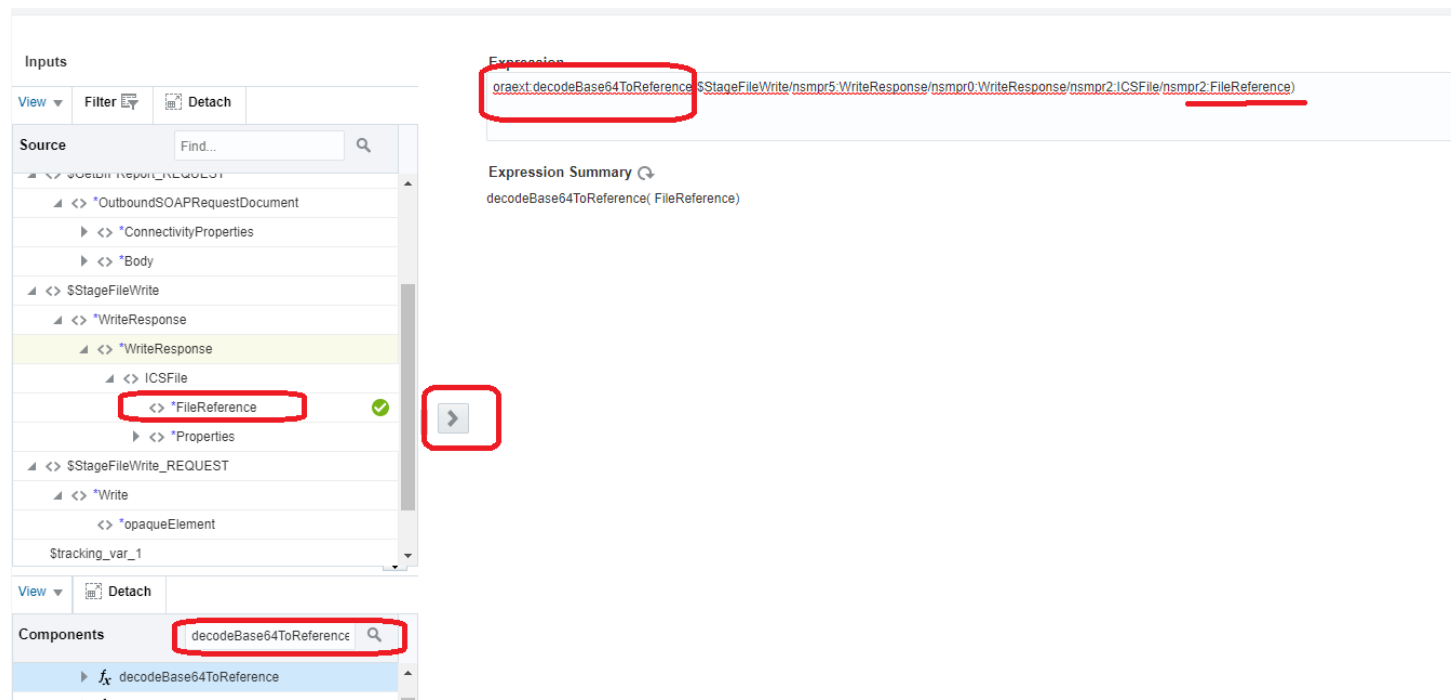
eater of complexity. For example, you can use assignments in other activities and in maps.



27. Enter 'decodeBase64ToReference' in search box and click on Search → Select 'decodeBase64ToReference' function → click on >



28. Delete 'encodedValue' from the expression editor → expand \$StageFileWrite → expand WriteResponse → expand ICSFile → select FileReference → Click on > Please cross check the below screenshot for your reference.



29. Click on Validate and Click on Close. System displays the following screen.

Variable	Data Type	Description	Operation	Value
(x) DecodeResponse_assignment_1	string	Type a description		decodeBase64ToReference(FileReference)

30. Click on Validate and Click on Close. System displays the following screen.




31. Click on Actions → Drag and Drop the Stage File activity after DecodeResponse activity
32. Enter Basic Info as per the below screen and click on Next

33. Enter the information as per the below screenshot and click on Next

34. Keep default values as per the below screenshot and enter Next.

Configure Stage File Action

Help ▾ < Back Next > Cancel Done

 **Configure the Stage File Action with Schema Options**
Define the schema options for Stage File Operation

☒ Basic Info
☒ Configure Operation
☒ **Schema Options**
 Format Definition
 Summary

? Do you want to specify the structure for the contents of the file?
☒ Yes ☐ No


? Which one of the following choices would be used to describe the structure of the file contents?
 Sample delimited document (e.g. CSV) ▾

35. You must have received 'GLCCReport1.csv' along with this document. Please upload GLCCReport1.csv by clicking on "Choose File" button

And Enter Record Name and Recordset Name as per the report. Here we are entering Ledger and LedgerSet as Record Name and Recordset Name and click on Next and click on Done

Configure Stage File Action

Help ▾ < Back Next > Cancel Done

 **Define the Schema Format**
Define the parameters for generating an XSD for native format or non-XML languages. The XSD is used at runtime to translate a native format message into an XML message and vice versa.

☒ Basic Info
☒ Configure Operation
☒ Schema Options
☒ **Format Definition**
 Summary

Create a New Schema from a CSV file

Select a New Delimited Data File Choose File No file chosen

Selected File Name GLCCReport1.csv

* Enter the Record Name

* Enter the Recordset Name

Select the Field Delimiter

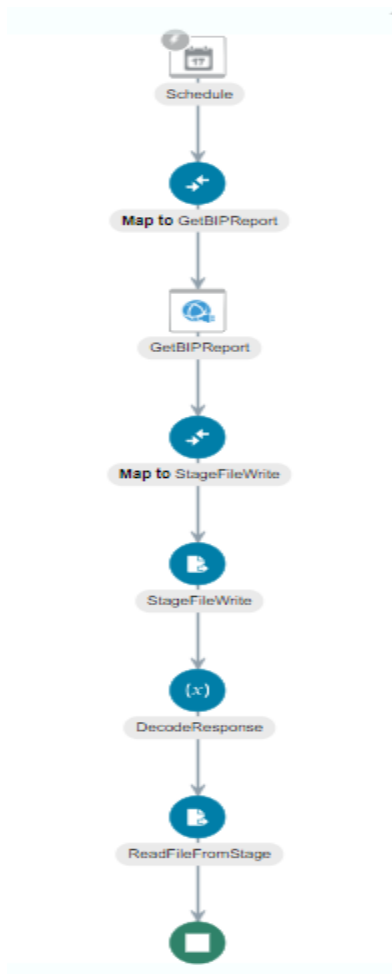
Character Set

Optionally Enclosed By

☐ Detach ☒ Use First Row as Column Headers ☐ Mark All As Optional

LEDGERNAME	SEGMENT1	SEGMENT2	SEGMENT3	SEGMENT4
String ▾	String ▾	String ▾	String ▾	String ▾
Mandatory ▾	Mandatory ▾	Mandatory ▾	Mandatory ▾	Mandatory ▾
US Primary Ledger	101	10	78630	000
US Primary Ledger	101	10	77600	000
US Primary Ledger	101	10	60540	000

36. System displays the below screen and click on Save.



37. Click on + icon after “ReadFileFromStage” activity → Search & Select Stage File activity and enter “TransformAndWriteToStage” as Basic Info and click on Next

Configure Stage File Action

Welcome to the Stage File Action Configuration Wizard
This wizard helps you to configure Stage File Action. You will be asked to define parameters and schema for performing the file operation.

Basic Info

What do you want to call your action?
TransformAndWriteToStage

What does this action do?
Describe the action's purpose and detail

38. Enter the information as per the below screenshot and click on Next

The screenshot shows the 'Configure Stage File Action' dialog box. The title bar says 'Configure Stage File Action'. Below the title bar, there is a 'Help' button and navigation buttons: '< Back', 'Next >', 'Cancel', and 'Done'. The main content area has a header 'Configure the Stage File Action Parameters for the Selected Operation' and a sub-header 'Define the parameters for Stage File Operation'. On the left, there is a sidebar with a tree view containing 'Basic Info' (checked), 'Configure Operation' (selected), 'Schema Options', 'Format Definition', and 'Summary'. The main area contains the following fields:

- * Choose Stage File Operation: A dropdown menu with 'Write File' selected.
- * Specify the File Name: A text input field containing 'temp.csv'.
- * Specify the Output Directory: A text input field containing '/tmp1'.
- Append to Existing File: A checkbox that is currently unchecked.

39. Keep the default values as per the below screenshot and enter Next.

The screenshot shows the 'Configure Stage File Action' dialog box, Step 2: Configure the Stage File Action with Schema Options. The title bar says 'Configure Stage File Action'. Below the title bar, there is a 'Help' button and navigation buttons: '< Back', 'Next >', 'Cancel', and 'Done'. The main content area has a header 'Configure the Stage File Action with Schema Options' and a sub-header 'Define the schema options for Stage File Operation'. On the left, there is a sidebar with a tree view containing 'Basic Info' (checked), 'Configure Operation' (checked), 'Schema Options' (selected), 'Format Definition', and 'Summary'. The main area contains the following fields:

- ? Do you want to specify the structure for the contents of the file?: Radio buttons for 'Yes' (selected) and 'No'.
- ? Which one of the following choices would be used to describe the structure of the file contents?: A dropdown menu with 'Sample delimited document (e.g. CSV)' selected.

40. You must have received 'GLCCReport2.csv' along with this document. Please upload GLCCReport2.csv by clicking on "Choose File" button

Define the Schema Format

Define the parameters for generating an XSD for native format or non-XML languages. The XSD is used at runtime to translate a native format message into an XML message and vice versa.

Basic Info

Configure Operation

Schema Options

Format Definition

Summary

Create a New Schema from a CSV file

Select a New Delimited Data File No file chosen

Selected File Name GLCCReport2.csv

* Enter the Record Name

* Enter the Recordset Name

Select the Field Delimiter

Character Set

Optionally Enclosed By

☐ Detach ☒ Use First Row as Column Headers ☐ Mark All As Optional

LEDGERNAME	SEGMENT1	SEGMENT2	CHART_OF_ACCOUNTS
String	String	String	String
Mandatory	Mandatory	Mandatory	Mandatory
US Primary Ledger	101	10	21
US Primary Ledger	101	10	21
US Primary Ledger	101	10	21

41. Enter Record Name and Recordset Name as per the report. Here we are entering Ledger and LedgerSet as Record Name and Recordset Name and click on Next and click on Done

Configure Stage File Action

Define the Schema Format

Define the parameters for generating an XSD for native format or non-XML languages. The XSD is used at runtime to translate a native format message into an XML message and vice versa.

Basic Info

Configure Operation

Schema Options

Format Definition

Summary

Select a New Delimited Data File No file chosen

Selected File Name GLCCReport2.csv

* Enter the Record Name

* Enter the Recordset Name

Select the Field Delimiter

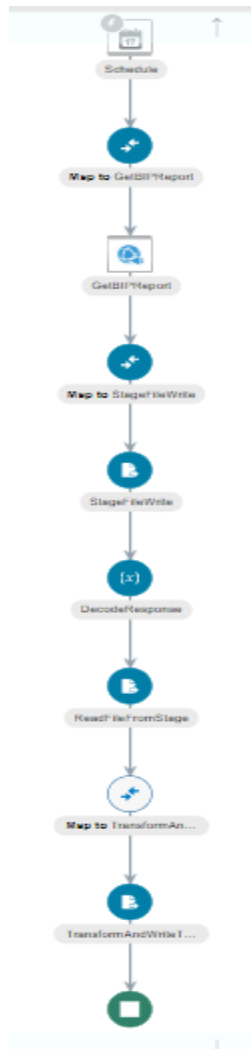
Character Set

Optionally Enclosed By

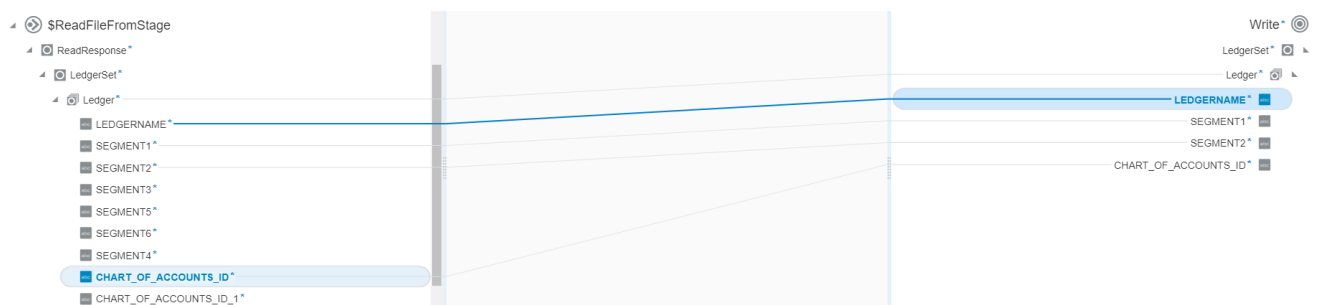
☐ Detach ☒ Use First Row as Column Headers ☐ Mark All As Optional

LEDGERNAME	SEGMENT1	SEGMENT2	CHART_OF_ACCOUNTS
String	String	String	String
Mandatory	Mandatory	Mandatory	Mandatory
US Primary Ledger	101	10	21
US Primary Ledger	101	10	21
US Primary Ledger	101	10	21
US Primary Ledger	101	10	21

42. System displays the below screen and click on Save



43. Edit “Map to TransformAndWriteToStage” activity and do the mappings as per the below screenshots for all the fields in the Target. And click on Validate and Click on Close.



44. Click + icon after “TransformAndWriteToStage” activity and search & select FTP Conn 96 06

45. Enter Basic Info as “WriteFile2FTP”

46. Select the operation as “Write File” from drop down and enter Output Directory as /upload/public_ftp/<<Your initials/student id>>

Eg: /upload/public_ftp/9606

Enter file name pattern as “BIPReport%SEQ%.csv”

Refer the below screenshot:

Oracle Adapter Endpoint Configuration Wizard

Configure the Operation Parameters for the Target FTP Endpoint
Select the operation to perform and define the parameters required for target FTP endpoint.

Navigation: < Back, Next >, Cancel, Done

Left Panel (Steps):

- Basic Info
- Operations**
- Schema
- File Contents - Definition
- Summary

Main Content Area:

- * Select Operation: Write File
- * Select a Transfer Mode: ☐ ASCII ☒ Binary
- * Output Directory: /upload/public_ftp/9606
- * File Name Pattern: BIPReport%SEQ%.csv
- ☐ Append to Existing File
- * PGP Encryption / Decryption

OIC can do PGP Encryption using public key on the file to be sent to external FTP servers for protecting sensitive data and to preserve confidentiality and privacy. Similarly, OIC can do PGP Decryption using private key on the incoming file to decrypt the encrypted contents.

 - ☐ Perform PGP Encryption on the file to be sent to external FTP Server
 - ☐ Perform PGP Decryption on an encrypted file to be sent to external FTP Server as clear text
 - ☒ No PGP Encryption/Decryption on the file to be sent to external FTP Server
- * Sign / Verify Signature

OIC can do the signing using the private key to allow the receiver to verify that the file contents were not altered during the transit. Similarly, OIC can do Signature Verification using the public key on the incoming file to verify that the contents were not altered during the transit.

 - ☐ Perform signing on the file to be sent to external FTP Servers
 - ☐ Perform verification on the incoming signing file that needs to be sent to external FTP Server
 - ☒ No Signing/Verification on the file to be sent to external FTP Server

47. Click Next

48. Select No and click Next

Oracle Adapter Endpoint Configuration Wizard

Welcome to the Oracle Adapter Endpoint Configuration Wizard
This wizard helps you configure the processing details.

Navigation: < Back, Next >, Cancel, Done

Left Panel (Steps):

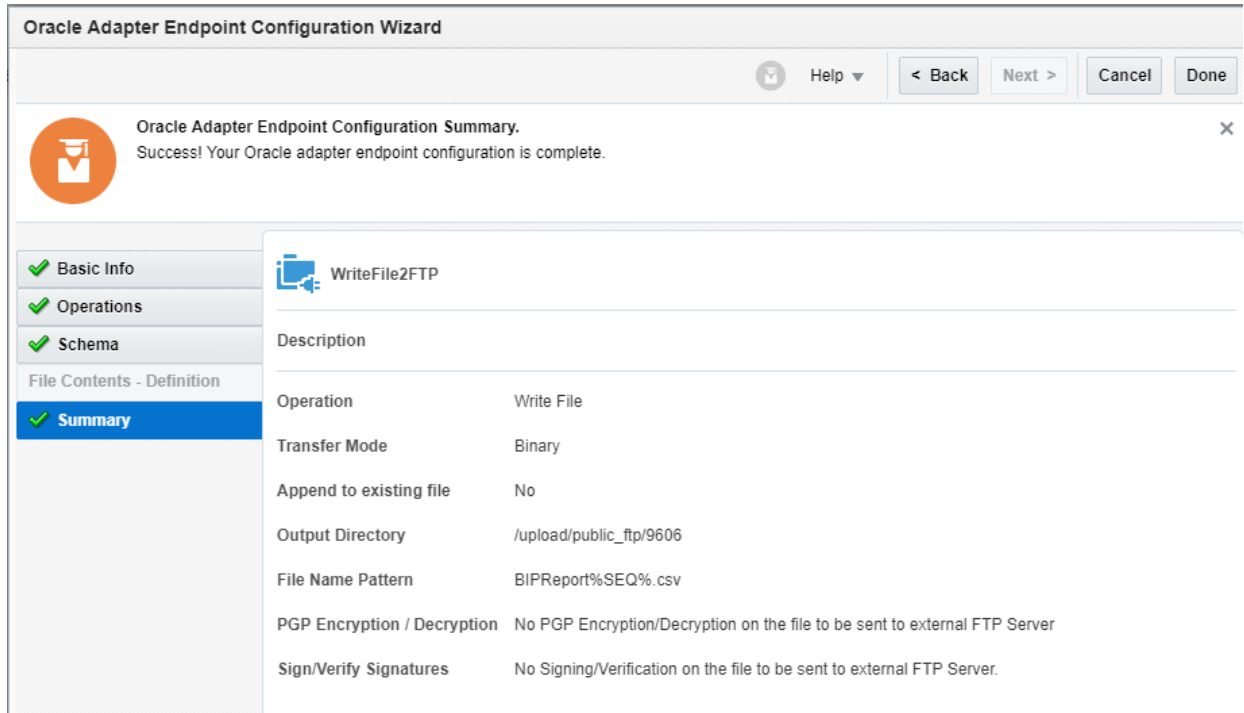
- Basic Info
- Operations
- Schema**
- File Contents - Definition
- Summary

Main Content Area:

? Do you want to specify the structure for the contents of the file?

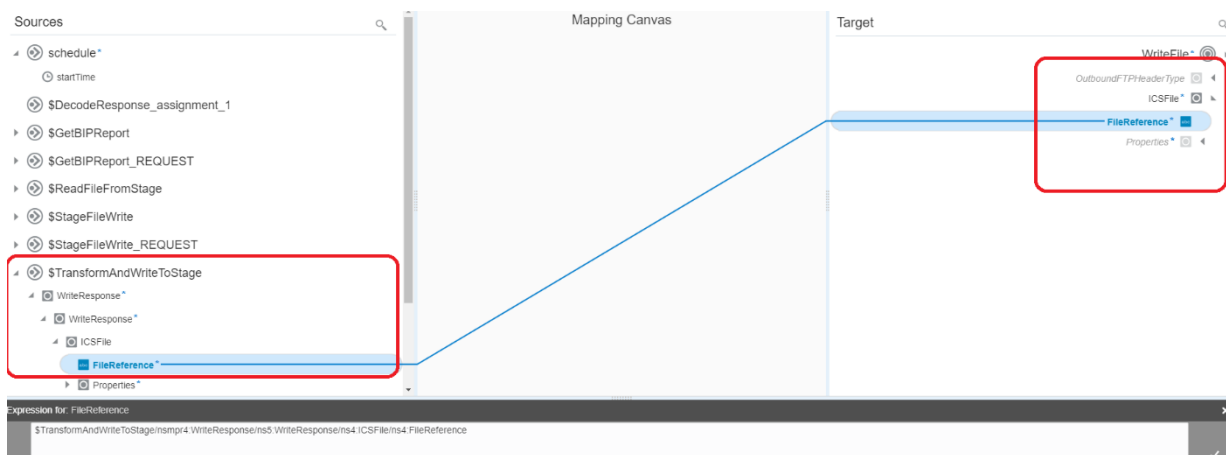
☐ Yes ☒ No

49. Review summary as per the below screenshot and click on Done



50. Edit “Map to WriteFile2FTP” activity → and map as per the below screenshot

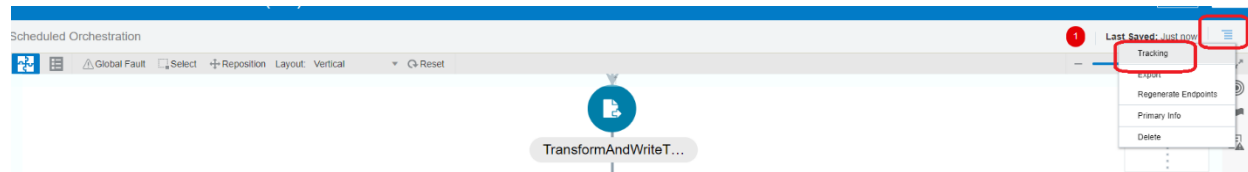
\$TransformAndWriteToStage/nsmpr4:WriteResponse/ns5:WriteResponse/ns4:ICSFile/ns4:FileReference
e to WriteFile→ICSFile→ FileReference



51. Click Validate and click Close.

52. Save the integration flow

53. Click on Actions → Click on Tracking →



54. Select startTime from Source and move it to Business Identifiers by click on > symbol and click on Save
55. Click on Save to save integration flow.
56. Activate the integration, select 'Enable Tracing' option and select 'Include payload' option and click on Activate button → click on Submit Now under Actions Menu after integration flow has been activated.
57. Go to Monitors section and click on Tracking → Check the status of the integration
58. Check the file in FTP location and if you have a file in the FTP location then you have successfully completed this lab. **Congratulations!!!**